

## REMARKS

Reconsideration of this application is respectfully requested in view of the following remarks.

### STATUS OF CLAIMS AND SUPPORT FOR AMENDMENTS

Upon entry of this amendment, claims 1-11 will be pending in this application.

Applicants have amended the specification to include the headings suggested in MPEP § 608.01(a), and to include a brief description of the drawing.

Applicants have amended claims 1-7 to eliminate the phrase "characterised in that" and to recite positive process steps. Applicants have also amended claim 1 to clarify that the molar ratio of thiosulphate to mercury is, at maximum, 1.0. Support for this amendment can be found in the specification, *inter alia*, at page 3, lines 14-16; page 4, lines 2-6 and lines 28-30. Applicants have similarly amended claim 4, which is also supported in the specification, *inter alia*, at page 4, lines 28-30.

New claim 8 is supported by the specification, *inter alia*, at page 3, lines 23-28 and page 4, lines 8-14.

New claim 9 is supported by the specification, *inter alia*, at page 4, line 25 to page 5, line 3.

New claims 10-11 are supported by the specification, *inter alia*, at page 4, lines 8-14.

### EXAMINER'S COMMENTS REGARDING SPECIFICATION

At page 2 of the Office action, the Examiner has indicated that the specification should be modified to contain a section headed "Brief Description of the Drawing". Applicants have amended the specification to include such a section.

## INDEFINITENESS REJECTION

At page 2 of the Office action, the Examiner has rejected claims 1 and 5 under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants respectfully traverse this rejection for the reasons given below.

Applicants have eliminated the phrase "corresponding to a maximum of one time the amount of mercury dissolved in the acid solution" and have clarified the reference to the molar ratio of thiosulphate to dissolved mercury in claim 1. In claim 5, Applicants have eliminated the term "chloride environment mercury." Accordingly, the claims are clear and definite, and reasonably apprise those of skill in the art of the metes and bounds of the claimed invention. As a result, this rejection should be withdrawn.

## OBVIOUSNESS REJECTION

At pages 3-4 of the Office action, the Examiner has rejected claims 1-7 under 35 U.S.C. § 103(a) as obvious over GB 1,409,456. Applicants respectfully traverse this rejection for the reasons below.

GB 1,409,456 removes mercury from sulfuric acid solutions by decomposing the thiosulfate into reactive particles of sulfur, which take up dissolved mercury. See GB 1,409,456 at page 2, lines 18-37.

Applicants respectfully submit that GB 1,409,456 does not establish a *prima facie* case of obviousness because there is no teaching or suggestion in that publication of a molar ratio of thiosulphate to dissolved mercury of, at maximum, 1.0. As Applicants have explained in the specification at page 2, line 23 to page 3, line 3, GB 1,409,456 discloses the use of an amount of thiosulphate that yields a thiosulphate to mercury molar ratio of about 140 (i.e., about 140 times the maximum

recited in Applicants' claims). Using this large amount of thiosulphate produces an amount of sulfur that is difficult to remove by, e.g., flotation. By contrast, using a ratio of thiosulphate to mercury within the range recited in Applicants' claims tends to avoid creation of sulfur, and thus the need for its removal from the solution.

In addition to failing to suggest the maximum thiosulphate to mercury ratio recited in Applicants' claims, GB 1,409,456 does not describe the molar ratio of thiosulphate to mercury, or otherwise suggest that this molar ratio is a result-effective operating parameter. Accordingly, it could not have been obvious to obtain the maximum level recited in Applicants' claims by "routine optimization." In this respect, MPEP § 2144.05(II)(B), in relevant part, states:

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.

*In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result-effective variable.).

In the present situation, GB 1,409,456 does not describe any significance whatsoever for the molar ratio of thiosulphate added to dissolved mercury, much less suggest that this parameter should be optimized. Under these circumstances, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness, and this rejection should be withdrawn.

Applicants respectfully submit that claims 1 and 12-25 are in condition for immediate allowance, and an early notification to that effect is respectfully requested. If the Examiner believes that further issues remain to be resolved, he is respectfully

requested to contact the undersigned so that an interview may be arranged to discuss these remaining issues.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: July 7, 2008

By:



Bruce D. Gray  
Registration No. 35799

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620